

From: Steve Weik
To: Microsoft ATR
Date: 1/14/02 10:41pm
Subject: MICROSOFT SETTLEMENT IS A BAD DEAL...

Dear Judge Kollar-Kotelly

I recently saw this Op-Ed in the San Jose Mercury News - and I think it conveys very clearly some of the main problems with the DoJ's proposed settlement with Microsoft. I understand that you are now charged with reviewing the PFJ - and as a long-time software industry veteran (and someone who is not strongly affiliated with any of the "camps" on this issue) I'd ask you to make SURE that the final agreement allows for a free and fair software industry - and one that will produce secure code (something that Microsoft doesn't seem to know how to do).

Thanks.

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SECURITY IN DIVERSITY

By Greg Papadopoulos

The antitrust case against Microsoft isn't just about competition; it's about security.

Over and above the usual economic risks presented by an unchecked monopolist -- rising prices and monochromatic innovation -- the country's (and the world's) computer infrastructure will be increasingly vulnerable to attack if a single software system predominates.

Imagine what would happen if producers of, say, corn were able to use their market power to eliminate wheat, rice, and oats. Suppose that 90 percent of the world's grain supply came from a single variety of corn. We would be faced with the unacceptable risk that some blight, some single disease, might wipe out an enormous portion of our food supply.

So far, the possibility of bioengineered attacks on food crops has been largely theoretical, but engineered attacks on the Internet's software infrastructure happen all the time. We've seen what can happen when hackers exploit flaws in operating systems and Internet browsers. Last year's "I Love You" virus infected several million computers and caused as much as \$10 billion in damages, while this year's "Code Red" and "Nimda" worms caused another \$4 billion. And the number of incidents is on the rise.

Having only one kind of operating system or one kind of browser would make it much, much easier for saboteurs to bring the entire Internet to its knees.

In a perfect world, software would be free of flaws for attackers to exploit. Quality control does reduce the number and severity of such flaws, but the current state of the art is that nearly every software release contains a few. Diversity is currently the best defense against attacks on the flaws of any particular software component.

For increased reliability, a standard technical strategy at all levels of computer system design is redundancy and diversity. Fortunately, the connectivity of the Internet routing infrastructure is now highly redundant and built out of routers from multiple sources. It's the next layer or two -- operating systems and software applications for desktop computers and other Web-enabled devices -- that need attention.

For very high reliability software, a well-studied solution is to have multiple independent teams each create their own redundant versions. This way a single design error or bug doesn't take down the whole system -- the other software versions take over instead.

I believe that it's crucial to the health of the Internet -- and to the worldwide economic system that has come to rely on it -- that the infrastructure include measurable diversity. By that I mean we should have, at a minimum, three operating systems and three browsers, independently designed and constructed. That way, if a software virus were to incapacitate the most widely used version of either, we could have enough residual capacity to continue at least partial operations and recover from the damage.

For a single entity to control 80 to 90 percent of the market for PC operating systems, Internet browsers, e-mail readers, and office productivity software (which can also spread viruses) is clearly a significant security risk. To then allow that monopoly to actively attempt to drive out its remaining competition would hardly be in the public interest.

It's now up to Judge Colleen Kollar-Kotelly to decide whether the proposed settlement between Microsoft and the Department of Justice is a just solution. But from where I sit, it contains too many loopholes to measurably effect Microsoft's behavior, much less bring about the kind of diversity that would enhance our security.

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